Title:

Astrometric Expectations for the Pan-STARRS AP Survey

Abstract:

The Pan-STARRS-1 (PS1) astrometry and photometry (AP) survey is scheduled to begin in 2006. It will use a 1.8-m telescope and a single gigapixel camera located in an observatory on Haleakala, and its goal is to produce an accurate reference catalog over all of the available sky. In preparation, images taken with large mosaic cameras on the SUBARU 8-m, CTIO 4-m, and KPNO 4-m telescopes have been analyzed to develop estimates and models for astrometric accuracy and algorithm development. On the basis of preliminary analysis, a 10-second exposure in 1-arcsecond seeing can be expected to deliver a relative astrometric accuracy of 7-10 milliarcseconds (35-50 nanoradians), and the PS1 AP survey should deliver mean positions with an accuracy of 5 milliarcseconds (25 nanoradians) or better down to an R-band magnitude of 20 or fainter. Should this level of accuracy be realized over large areas of the sky, the PS1 AP catalog will be an excellent choice for in-frame metrics needed by various SOI and SSA applications.

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Restrictions:

None

Short Biography of Presenting Author:

Dave Monet has been on the USNO staff since 1984, and has worked in the areas of CCD astrometry and the compilation of deep, dense star catalogs. He led the team that produced the USNO-A and USNO-B star catalogs, and is now working on projects that improve the astrometric and photometric accuracy of reference catalogs.